

THE ORIGIN OF FOOD CULTIVATION IN THE MIDDLE-EAST AND THE HUMAN ENVIRONMENT DYNAMICS

JONALI SARMA

Former Student, Department of History, University of Delhi, Delhi, India

ABSTRACT

Food production and domestication of animals brought about revolutionary changes in the history of human civilization. The Neolithic period was different from the earlier Natufian phase, and PPN A phase although the structural continuation was seen at a different level. In about 10,000 BC, the Levantine Corridor emerged as a major hub for food cultivation. The Eincorn and Emmer Wheat brought about significant progress to the agricultural realm. It was the earlier Younger Dry as Period, which also need to be studied in the study of the Neolithic. Climatic fluctuation occurred during the period, and the human beings with its increased coherent ability and technological know-how saw Neolithic as distinct from the Mesolithic and the Natufian period. From the hunting and foraging activities, we see the emergence of rudimentary social-ties and dwellings with the arrival of the Neolithic. The complexity in the social knitting and the feasting activities gathered momentum in due course of time. The sites like Catal Huyuk, Jericho and Ali- Kosh are exemplary evidence in the study of the Neolithic. The human progress and technological know- how provided the base for food cultivation. The study of the Neolithic brings about coherentide as and structural determinants, which would remain phenomenal attribute in the area of historical studies.

KEYWORDS: Food Production, Natufian, Technology, Society, Human Progress & Historical Study

Received: Jul 28 2018; **Accepted:** Aug 17, 2018; **Published:** Sep 03, 2018; **Paper Id.:** IJHRDEC20182

INTRODUCTION

The Neolithic Period experienced the beginning of food cultivation in the Middle Eastern realm, which led to the formation of a complex social and human phenomenon. The wild grasses were domesticated during the period, and there were new varieties that were bred in about 10,000 BC. The Humans began to explore more during this period and there was the societal structure in the rudimentary form, that could be seen during the early Neolithic period. Later, the new methods of Domestication of plants got a faster pace, and there was the cultivation era that dominated the scene.

The Evidence that were gotten from the Levantine Corridor, Mesopotamia and Regions of Syria etc. have ample proof to suggest that Food Cultivation played the major role in determining the pattern of the society. The PPN A category and PPN B category reveals how the Neolithic pottery too were the formulations and key to the important phase of food cultivation. The relics and the structures that were gotten from the above mentioned sites also had different angular pattern and square-grid formations, which could give important data of the era of the food cultivation.

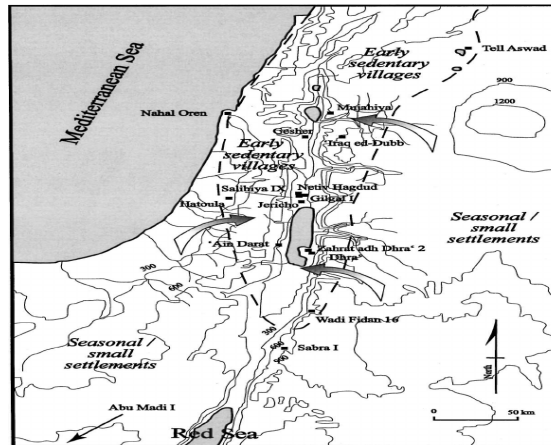


Figure 1: Levantine Corridor
 Source: <https://www.researchgate.net>

The pollen grain analysis and the Archaeo-botanical studies have become important for the Neolithic Period. This period had the important environmental modification, in the most distinct form that could bear crucial data in the pollen grain analysis. The emmer wheat and the einkorn formed the important varieties, which were cultivated in a large scale during the period. The Neolithic period also had climatic fluctuation, which were the important for the growth of plants in the Levantine corridor.

There were so many formulations regarding the origin of cultivation in the Middle East area. This particular area is an important area of ancient study, because there were so many social and structural changes in the region that led to research orientation. Food Cultivation is the history of human civilization, that have formed the cradle of food culture in the map of the world. The wild varieties were seen, which came up in the climatic and epochal changes, also led to the change in the social complexities of humankind. With the growth of sedentary lifestyle, there began a new kind of Housing or dwellings, and this further led to stratum that could actually unearth the so important branches of early Neolithic settlers(V Gordon Childe,1963).



Figure 2: Neolithic Man
 Source: <https://www.stmuhistorymedia.org>

While knowing about all the important theories of food production, we also have to know about the water availability in the context. In the Mesopotamian Region, there were the rivers like Tigris and Euphrates and in the food cultivated area of Levantine corridor which had the conditions attached to it (Simmons, 2007). When we see the pollen grain analysis once again, we see the important formulation that says about the steppe kind of environment prevalent in the

Levantine corridor. The fertility of the soil and the Geo- Environmental conditions also became important in the context. The soil had to be ingrained with humus and the water availability is must for the food cultivation to take place. The hydrological aspect is the important part of human-environment dynamics, and here too in the Neolithic Revolution, we see the importance of this aspect. In the History of human civilization, the sets of condition are vital for sustenance.

In the Human-Environment dynamics, we can also mention about few things that have developed in due course of time. Firstly, the settlers had linkage with the coast and the hinterland and inflow of goods took place hereafter. In the coastline, we see that food cultivation got major impetus after the connectivity gained ground. In the Neolithic Period, we see development of faster technology which is important for the development of different kind of networks. In the technological dimension, we see the flakes and the sharp edged tools which provided the movement of goods and the making of hoes, sickles etc. The Evidence found at Catalhuyuk and Ali kosh are major ones in this respect.

Actually, the development of technology also provided for the massive increase in food cultivation. When we see things like human settlement in Catalhuyuk the Sedentary, lifestyle became the important crux to food production. It can also be mentioned that the domestication of animals too brought an epochal change in the human-environment dynamics. There can be domestication with the herds that are human friendly and also could be based in the cultivating activities. These domesticated breeds have their distinct traits, which could be again used in the diverse activities. Therefore, a paradigm shifts in human niche took place in the Neolithic period. The sophistication of domestication grew very much unique in the Neolithic Period.

The human settlements of the Middle-East were concentrated in the pockets of Jordan and Anatolia majorly. How the foraging community suddenly got a sedentary lifestyle? The dietary pattern and the demographic changes may be attributed to it (Halla et al.,1971). The surplus food and the grain production gave a new impetus to human population. The dietary effect could also be seen in their socio-cultural attributes. The community life got a new height with feasting and togetherness. Here lies the importance of Neolithic, when human started a community and sedentary lifestyle.

There are also the Anthropological studies which are related to it. The Anthropological studies by Anna B. Cohen and scholars like Bellwood are significant in this regard. Thematically, the formulation that are gotten from the organisational study of the Neolithic sites are in reality the best ones. We have to mention about the pottery in the context. The PPN A and the PPN B holds a lot of potential in the study of the anthropological realm. The grain sites and the radiocarbon dating method are the methodological study, where, the dates and the other issues of the Neolithic can be studied. The stone-structures and the housing or dwellings also revealed a lot about the community lifestyle.

The Human Evolution also got a new impetus with the arrival of the Neolithic. In the Middle East, the food cultivation was taking place, whereas in the other nearby areas of Eastern Europe and the Far Regions like Britain, the scattered civilisation was making the new sedentary lifestyle. The most important issue here is the working tools and way to deal with surplus production was foraging ahead. The flake-work and grinding work became the core of the Neolithic. It was altogether, the working of the sedentary life and dynamics of new technology that made the watershed of the period (Wooley, 1963).



Figure 3: Emmer Wheat
Source: <https://www.neot-kedumim.org.il>

Here, the discussion regarding the climatic fluctuation comes into forefront. The issues here again are the epochal change in the Holocene period, when human beings grew rapidly, and we have movements of human branches of population that is the study of the demographics. The Jordan Valley had all the conditions, whereby the agricultural production and the domestication of plants was taking place at a faster rate. The new breeds like the emmer and the einkorn wheat was seen in the valley. The domesticated varieties were the different varieties. Therefore, we can say that altogether a different climatic scenario was taking place.

DOMESTICATION OF ANIMALS IN NEOLITHIC PERIOD

According to Atici et. al. (2017), to study the dispersal of agricultural economies from South West Asia to South East Europe, archaeologists used a dichotomised Framework. The colonisation or demic diffusion model entails replacement of foragers by advancing waves of farmers, whereas the indigenous adoption or cultural diffusion model argues for a process of acculturation instead of endemic population movement or replacement.

There was a high degree of variation in the domestication analytics and controlling the same. The inception of sheep breeding and the domestication of goat brought a unique culture to the human environment dynamics. The movement in a transcontinental mannerism, marked the importance of the Anatolian domestication of pigs, sheep and cattle. Around 20,000 domestication evidence has been gotten from the region, the western route and the coastal route was one of the most favourable routes. Lakes of Anatolian West derives a unique combination of multilateral process. Hence, the domestication of cattles and sheeps brought a new direction to the study of the Neolithic in Middle East.

In the domestication process, it is to be studied that humans innovated the co-habitation with the cattle and pigs in their sedentary Neolithic lifestyle. In the initial period, it was the primarily subsistence culture which saw marginal nucleated families in the Middle East. However, the demographic changes in the later times, brought about changes to the late Neolithic mode of Economy. The movement of the animals and their herds are the evidence of a complex and stratified economic structure. The gradual transformation was towards a tertiary kind of dynamics in the Middle East, where herds were found at sites like the Lake District. The purpose of the herding and the size of their bone analysis is the recent area of study among the scholars. In Catalhuyuk too, similar study is done.

There, increased the social complexities with the Neolithic period. How did the settlers settle in the valley of Jordan and the Anatolia became the area of study in the coming years? The favourable climate in these areas made it far ahead of their Northern Counterparts, where the climatic conditions were harsh. The Lake settlements in Switzerland too

saw some Neolithic settlements, but then there was the existence of human beings seen here. They had their own sets of conditions and there were also changes in the climatic pattern. The food also accommodated according to the environmental conditions (Price T D, 2000).

The study of areas cited and their culture becomes very important in the study of History. The areas and their sites determine the spatial approach and their special traits related to it. The Neolithic was the exemplary period, where such spatial approach could be formulated in order to reconstruct the past. The Annales School did a phenomenal study regarding the River Coast, Environment, Topography and the typology of the soil, which determined the course of the civilisation. The scholars like Binford and Bellwood have made excellent study in this regard. Geography determines the destiny of human civilisation and the very fact has been postulated by Annales school.



Figure 4: Natufian Village
Source: <http://www.megalithic.co.uk>

Cultural formation and the early social dynamics happened in the Natufian period. Some authors link these social stresses with simultaneous changes in the use of zoomorphic art, as a means of alleviating scalar stress and changing mortuary practices. "Moving to a consideration of how these practices change with the onset of the pre-pottery Neolithic art around 10,300 BP, Belfar Cohen and Bar- Yosef discuss how, for the first time, we see the emergence of large agricultural communities of several hundred people, large communal buildings, and a new emphasis on anthropomorphic art." (Kuijt, I.,2006).

The next phase is the PPN, A Phase which had distinctive traits. The Hallen Cemi sites show the early nature and evidence of sedentary lifestyle. There is unique evidence of "Deliberative Organisation of space at the structural and settlement level, in the case in the construction and maintenance of a large courtyard area, with the entrances of surrounding residential structures facing away from the courtyard. Drawing on the presence of public buildings, as well as the presence of highly stylized carved stone bowls, pestles and batons here."(Michael Rosenberg and Richard Reading, 2000).

As time went on in the Near East, we see settlements like Cayunu, Ain Ghazal etc. where the social organisation got knitted in a stable manner. The Household too gained the symbolised attachment. Here, the Nuclear Settlement theory became crucial, because of the nature of the social organisation and also the reliance on household autonomy. Scholars like Bryd have studied the same in a cumulative manner.

Kujit, I. (2006)said, “The Harifian Culture from the Neger (Dated to 10,700-10,100 BP) and Abu Madi 1 entity (10,100-97,000 BP) from Southern Sinai (Bar Yosef, 1985), which are particularly contemporaneous with the PPN A of the Jordan Valley, preserved more elements of the core Natufian Tradition, in lithic technology and the settlement pattern than have contemporaneous assemblages recovered from the core area itself and its neighbouring regions along the Levantine corridor. These sites, located in the marginal areas of the Levant, though having well-built dwellings and permanent installations, were occupied seasonally as part of residential moves, similar to the Bedouin groups (Bar Yosef, 1984). The same is true also for the succeeding PPN B cultures, which show clear dichotomy and the time lag between full- fledged agricultural sites in the fertile lands and the hunting gathering sites in the arid zones. While the process began with the early Natufian, about 13,000 years ago, it is only some 6,000 radiocarbon years later that we can unequivocally state that the entire Near East is populated by agricultural societies, whether farmers, herders or both.”

The PPN B phase continued at Jericho, Beisamaun, Yiftahel and Ain Ghazal. A unique regional style emerged in the Jordan Valley and the Western flanks of the hill. Mud Brick Structure and storage areas are found in this region. There is also the availability of hearths in this region. These are the relics that are gotten from the famous site at Jericho.



Figure 5: Jericho Settlements
Source: <https://www.thoughtco.com>

In the PPN B period, there were the slightly modified Environment compared to the earlier PPN A phase and the Natufian Culture. The Burial Rituals and storage items revealed some of the social complexities and structures of the period. The Jericho once again became the exemplary evidence of the same. There are several other notifications which reveal that PPN B structures had moved from nuclear realm to the sedentary and socially organised zone. This zone becomes the area of study for the scholars, as it determines the course of the grand Neolithic Period. Ain Ghazal too had important structures, which showed similar social cohesion.



Figure 6: Evidence of Ain Ghazal Neolithic
Source: <http://i.imgur.com>

CONCLUSIONS

In conclusion, it can be said that the study of the Neolithic remains the foremost area of curiosity among the scholars. The sedentary lifestyle and social complexities are the important determinants of the period. The earlier Natufian Culture and the PPN A period shows the rudimentary form of social dynamics. The domestication of animals also shows the transition from the complex hunting gathering society to the sedentary lifestyle of the period. Neolithic is also dealing with the technological and the coherent aspect of human environment dynamics. The stone technology too remains crucial in studying the Neolithic, as a complete scene in human development. The social and the agricultural aspects will always attract the scholars to the Neolithic study. The period had climatic fluctuations, which also determined the course of Agricultural Growth. The Fertile Crescent emerged due to growth of this factor. The study of Neolithic becomes even more interesting because of the famous sites associated with it. The Levantine Corridor remains the most important site. Also, Jericho and Ain Ghazal is studied enormously to know the social cohesion of the period. The Neolithic with all its magnificent sites and agricultural innovations remain the crucial area of study among the scholars.

REFERENCES

1. Ammerman, J., 1971 *Measuring the Rate of Spread of Farming in Europe*.
2. Atici, L., 2017 *Spread of Domestic Animals across Neolithic Western Anatolia*, 2017.
3. Bar-Yosef, O., 1984. *Seasonality among hunter-gatherers in Southern Sinai*, In: J. Clutton Brock & C. Grigson (eds.), *Animals and man*, Vol. II, BAR, International series 202, Oxford, pp 145-160.
4. Bellwood, P., 2009. *The Dispersal of established Food Producing Economics*.
5. Blondel, J. and Aronson, J., 1999: *Biology and Wildlife in the Mediterranean Region*.
6. C G Starr, *The early man*.
7. Frankfort, H., 1968. *The Birth of the Civilization in the Near East*, Doubleday Anchor Books Doubleday & Company, Inc. Garden City, New York.
8. Hallo, W. W. and Simpson, W. K., 1971. *The ancient Near East: A History*, New York: Harcourt Brace Jovanovich
9. Herden, D., 1962 *The Phoenicians*, Praeger; First Edition.
10. Kramer, S. N., 1981. *The History Begins at Sumer Thirty-Nine Firsts in Recorded History*.

11. Kuijt, I., 2006. *Life in Neolithic Farming Communities: Social Organization, Identity, and Differentiation*, Springer Science & Business Media, Social Science.
12. Zaghloul, m. *Applying quality of service technique for bandwidth management in jamming environment system*.
13. Moscati, S., 1962. *The Face of the ancient orient: A panorama of the Near Eastern civilization in pre classical times*.
14. Perles C, 2005 *Neolithic Anatolia as seen from the West*.
15. Price, T. D., 2000. *Editor, Europe's First Farmers*, Cambridge.
16. Rosenberg, M. and Redding, R. W., ed. *Hallan Cemi and Early village organization in Eastern Anatolia 2000*.
17. Simmons, A., 2007. *The Neolithic Revolution in the Near East- Transforming the Human Landscape*, Tuscon.
18. V Gordon Chide, *Man makes himself* 1936.
19. Wooley, L. *Beginning of civilization* 1963.
20. Zeder, M. A., 2009, *The Neolithic Revolution*.
21. Zeder, M. A., 2015. *Core Questions in Domestication Research*.